IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Jeffrey G. Cheng et al.	Examiner: Philip A. Guyton
Application No.: 10/672,180	Group Art Unit: 2113
Filed: September 26, 2003	Docket No.: 00100.03.0032
For: **METHOD AND APPARATUS FOR MONITORING AND RESETTING A CO-PROCESSOR**	

APPELLANTS' REPLY BRIEF IN RESPONSE TO EXAMINER'S ANSWER

Dear Sir:

This Reply Brief is in response to the Examiner's Answer mailed December 23, 2008.

On pages 12, 13 and 14 of the Examiner's reply, it appears that the Examiner is misapprehending the claim language and the teaching of the Forsman reference. Claim 1 requires, for example, a hang detector module "operative to detect a hang in the coprocessor by detecting a discrepancy between a current state of the coprocessor and a current activity of a coprocessor". It is the detection of a hang that is based on both a current state of the coprocessor and current activity of the coprocessor. The subsequent structure in the claim refers to the "resetting" of a coprocessor. There is a distinction in the claim as to the "detection" versus the "resetting" operations. Appellant respectfully submits that the Forsman reference only describes "detection" as based on a single event and that is the non-existence of a handshake "heartbeat signal 206". Appellant respectfully submits that the status/control register as taught in Forsman is only used in the "recovery operation" (i.e., resetting operation). As stated by Forsman in column 4:

initialize, test, and then monitor system operations.

In the present invention, when host **202** fails to detect a heartbeat signal **206** from service processor **204**, the entire data processing system is not powered down. Instead, host **202**, or service processor **204**, attempts to recover full operations of service processor **204** by initiating a hard reset of the service processor in which the service processor jumps back into the monitoring mode of operation without using JTAG/I^2C buses **210** to gather configuration and/or test results. Furthermore, such hard reset of service processor **204** is performed in a way that does not disturb host **202** usage of shared resources.

In instances where the service host **202** initiates the communications recovery with service processor **204**, host **202** checks the status portion of status/control register **208** in hardware logic **212** to determine if conditions exist that preempt host **202** from resetting service processor **204**. A few of examples of this type of status are when service processor **204** is in a special debug mode used by developers, when service processor **204** is in the process of handling a critical event, and when service processor **204** is attempting to recover from a self detected error.

If no status exceptions are found, then host **202** proceeds to set a bit in the control portion of status/control register **208** to cause a non-maskable interrupt to service processor **204** indicating that a hard reset of service processor **204** is about to commence. This provides a warning to service

As set forth above, the word "detect" in line 24 indicates that the heartbeat signal, and only the heartbeat signal, is used to detect whether a hang has occurred. Only the recovery operation in Forsman (e.g., lines 36-45) uses the status/control register – not the "detection" operation. The Examiner's rejection is incorrect since it is untrue as stated by the Examiner that "in order to detect a hang of service processor, two events must occur – a heartbeat signal is not received, and the status/control register must indicate a normal status of the service processor." (Reply, page 13, lines 5-8). As shown above, the status/control register is not used to detect any hang condition but is only used after detection of a hang has already occurred. The register instead is used only to determine whether the host can initiate a recovery or reset operation after a hang condition has already been detected.

As to claim 26, Appellant also reasserts the remarks made above and as such, the Examiner's basis and reasoning is contrary to the teachings of the reference therefore, must be reversed.

As to claim 35, Appellant again notes that the Examiner's rejection actually confuses the detection and recovery operations as set forth in Forsman and appears to combine these operations as a single detection operation in an effort to invalidate Appellant's claims which is incorrect in view of the actual teachings set forth in Forsman as noted above.

For at least these reasons and/or reasons set forth in Appellant's Brief, Appellant respectfully submits that the Examiner's rejections must be reversed.

Respectfully submitted,

Date: February 23, 2009

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